

## **TROPICAL RAINFALL MEASURING MISSION**

**August 28, 2000 – September 3, 2000**

**DOY 241 - 247**

**Day of Mission 1005 - 1011**

### **TRMM MISSION OPERATIONS**

- TRMM is flying in the -X Forward direction as of August 18th (00-231) at 19:24:26z.
- Yaw maneuver #46 is scheduled for September 7th (00-251).
- Delta-V #223 is scheduled for September 4th (00-248), using the ISP thrusters.
- The Beta angle range for 00-248 to 00-254 is  $-13.9^{\circ}$  to  $+13.3^{\circ}$ .
- The next Monthly Status Review (MSR) is scheduled for September 6th (00-250).
- The next Ground System SERB meeting is scheduled for September 21st (00-265).
- The next End of Life Planning meeting is scheduled for September 27th (00-271).
- The next Flight Software CCB meeting is scheduled for September 28th (00-272).
- 120 days remain until Extended Mission science operations begin on January 1st, 2001.

### **TRMM SUBSYSTEM OPERATIONS**

#### **Attitude Control System (ACS)**

00-244 (Thursday, August 31st)

Delta-V maneuver #222 was successfully conducted at 14:51:49z and 15:37:36z for durations of 37.25 and 25.25 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#6) for burn 1 and 2 was 39.6% and 32.2% (60.4% and 67.8% on time). The remaining fuel is 535.894 kg, and the final apogee and perigee height is 354.70 km x 347.65 km.

#### **Flight Data System (FDS)/Command & Data Handling (C&DH)**

The UTCF remains at 31535996.841021 seconds with a drift value of  $-772 \mu\text{s}$ . The current frequency standard offset remains x'7a2' with a current drift rate of  $-2.5953 \mu\text{s/hr}$ .

Q-channel restarts occurred on 00-241 at 09:27:24z, 00-242 at 04:01:09z and 15:06:01z, 00-244 at 00:57:20z, 00-246 at 23:42:22z, and on 00-247 at 05:30:56z and 12:45:40z.

EDAC multi-bit error occurred on 00-246 at 10:49:28z.

#### **Reaction Control Subsystem (RCS)**

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

#### **Power Subsystem**

The Power subsystem performed nominally during this period.

## **Electrical Subsystem**

The Electrical subsystem performed nominally during this period.

## **Thermal Subsystem**

The Thermal subsystem performed nominally during this period.

## **Deployables Subsystem**

The Deployables subsystem performed nominally during this period.

## **RF/Communications Subsystem**

The RF/Communications subsystem performed nominally during this period.

## **SPACECRAFT INSTRUMENTS**

### **CERES**

The CERES instrument remains in Diagnostic Mode following the DAP microprocessor telemetry dropout reported in June (AR #82). Two microprocessor patch loads were uplinked on August 30th (00-243) (CR #418 and #419) and two on August 31st (00-244) (CR #420) in an effort to better characterize the DAP failure.

### **LIS**

LIS performed nominally during this period.

### **PR**

PR performed nominally during this period. One software bus error was logged on September 3rd (00-247).

The list of Internal Calibration times over Australia in which PR was not radiating is below:

2000-241/19:06:15 - 19:08:23z  
2000-242/17:54:47 - 17:57:00z  
2000-243/10:14:31 - 10:17:21z  
2000-243/16:43:27 - 16:44:40z  
2000-243/18:17:30 - 18:19:37z  
2000-244/17:05:46 - 17:07:57z  
2000-245/09:23:40 - 09:28:45z  
2000-245/17:28:56 - 17:30:48z  
2000-246/16:17:18 - 16:19:28z  
2000-247/08:35:10 - 08:39:43z

2000-247/15:05:36 - 15:07:50z

## **TMI**

TMI performed nominally during this period.

## **VIRS**

VIRS performed nominally during this period.

## **GROUND SYSTEM**

The external hard-drive which will host the XTE System Software as a MOC failover backup was mounted on String-2 and will be configured next week.

During the orbit 15847 event on August 28th (00-241) String-1 locked up just prior to data release and the backup string experienced problems as well (ER #198). One SN event was added to ensure no data overflow occurred, and both strings were confirmed operational following a reboot.

The final MOC power configuration change was conducted on August 31st (00-244) in which all String-3 components were placed on Building 32 UPS-5 backup power.

A video monitor on String-3 was replaced on August 31st (00-244).

The TR2WS2 workstation power supply was replaced on September 1st (00-245) and the workstation is now fully operational.

## **Event Reports**

ER #198: String 1 Locked Up Prior to Release Requiring an Added Event - see Ground System.

ER #199: TDW Event Taken by Higher Priority User Rescheduled On 171. A new event was added on 171 four minutes later than the original AOS and all data was manually captured on that event.

## **Generic Late Acquisition Reports (for TTRs 19639)**

GLA #69: TDW/SSA2 1 min 38 sec late acquisition on the 00-358/17:43z event.

## **New Anomalies**

No new Anomaly Reports were generated during this period.

## **Recurring Open Anomalies**

No open Anomalies occurred during this period.

Prepared by:  
Andy Calloway  
TRMM Systems Engineer

Approved by:  
Lou Kurzmilller  
FOT Manager